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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,437	04/16/2004	Eduardo L. Quioc	5702-01051	1043

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EXAMINER

CULBRETH, ERIC D

ART UNIT	PAPER NUMBER
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3616

MAIL DATE	DELIVERY MODE
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07/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/826,437	Applicant(s) QUIOC ET AL.	
	Examiner Eric Culbreth	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Care should be taken with the claim identifiers in the future. It is noted that claim 7's identifier states it is "currently amended" but there is no change to the claim.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 27-29 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - a. In claim 27, line 4 there is no antecedent basis for "the inflator body".
 - b. In claim 32, line 3 there is no antecedent basis for "the combustion cup".

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 7, 9-10, 13, 30-31 and 33-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Kirchoff et al (US 3,972,545, of record).

Kirchoff et al discloses an inflator 5 for an inflatable restraint system in a vehicle (first two lines of abstract) comprising an inflator housing or body 6 having first and second ends and an inner peripheral wall, a tube or booster cup 34 extending in the

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body and having an outer peripheral wall and an end surface extending inwardly from the outer peripheral wall. The booster cup has a first propellant charge or pyrotechnic 21 positioned therein. The inner peripheral wall and outer peripheral wall are separated by a substantially annular space 16, 17 having a second propellant charge 18 positioned therein. An initiator assembly or squib 19 is disposed proximate the first end and operable to ignite the first charge 21. A filter 22, 26, 28, 29, 30, 32 abuts the booster cup end surface and a perforated disk 31 abuts the filter (as functionally recited, not only filters 22 and 32, but also pH neutralizer 26 and coolers 28 and 29 would remove or filter particulates, as neutralizer 26 has powder and coolers 28, 29, and 32 have coarse wire). A nozzle or annulus housing 33 is positioned at the second end of the body and abuts the perforated disc, the nozzle defining a nozzle outlet for supplying inflation gas to the restraint system (note column 4, lines 15-16, where gas passes through the perforated plate and perforated annulus 33 into the discharge orifice 13, and the cross section of annulus 33 in the figure, where there is an outlet or nozzle in communication with outlet 13)(claim 7). The filter has a length of one-fourth to one-half the total length of the body upon inspection of the figure (claim 9). As indicated by the phantom lines inside tube 34, the tube is cylindrical and as illustrated is coaxial substantially with the inflator body (claim 10). Regarding claim 13, Kirchoff et al's filter is substantially cylindrical (i.e., the body is cylindrical to allow screwing on at threads 11, and hence the filter is cylindrical) at its periphery positioned adjacent the inner peripheral wall. The filter has a substantially planar end positioned flush with the cup end surface. The product (inflator) would be assembled by the steps of claim 30

(positioning a booster cup, placing a charge in the space between the booster cup and body, inserting the filter then disc, and positioning a nozzle member in the inflator body constraining the filter and charge from movement)(claims 30 and 34). Charge 18 in the space is in the form of tablets (claim 31), and as functionally recited in claim 33 the filter length is sized to reduce or increase a gas pressure resulting from activation of a gas generator (i.e., this is a functional limitation of intended use; the filter would do one or the other).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-6, 11-12, 14-21, 27-29 and 32 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchoff et al in view of Goetz et al US 4,394,033 (of record).

Kirchoff et al does not disclose an apertured wall for the booster cup. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kirchoff et al to include an apertured outer wall on the booster cup or initiator tube because the substitution of Goetz et al's perforated tube for Kirchoff et al's rupturing tube would have yielded the predictable results of gases from the booster material contacting the tablets to one of ordinary skill in the art at the time of the invention (claims 1-6, 11, 14, 18-19 and 27-29; the other features in these claims are in Kirchoff et al, as discussed in the 35 USC 102 rejection above). Regarding claims 12

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and 32, the annular space in Kirchoff et al containing tablets 18 extends longitudinally from the body first end to a point substantially coplanar with the cup end surface.

Regarding claims 15-17, Kirchoff et al's tablets 18 are "stacked" adjacently in the annular space with cylindrical axes oriented perpendicular to the inner peripheral wall.

Forming annulus 33 and adapter 12 as integral (hence as a threaded nozzle engaged with the inflator body and the perforated plate) would be an obvious matter of design

choice, as parts are integral if they are rigidly secured together as a single unit; at any

rate, the use of a one piece construction instead of separate pieces is a matter of

obvious engineering design choice (In re Fridolph, 50 CCPA 745, 89 F. 2d 509, 135

USPQ 319). The inflatable restraint in Kirchoff et al is an airbag (lines 1-2 of the

abstract), and the booster cup or tube 34 is connected to the initiator body or squib

holder for squib 19 such that it is suspended from the initiator body and supported only

by attachment to the initiator body inasmuch as applicant's invention (claims 20-21).

7. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchoff et al in view of Goetz et al as applied to claim 14 above, and further in view of Schneider et al US006279945B1, of record.

The features of claims 22-26 are found in the combination of Kirchoff et al and Goetz et al above, except for an airbelt. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kirchoff et al and Goetz et al above to include the inflator on an airbelt in order to decrease focusing of loads in the seat belt (Schneider et al, column 1, lines 49-57).

Response to Arguments

8. Applicant's arguments filed 4/24/08 have been fully considered but they are not persuasive. Regarding the applicant's remarks in the second paragraph of page 7 of the 4/24/08 remarks (Kirchoff et al's drawings illustrate pH neutralizer between filtering and cooling means and that the drawings do not illustrate what is claimed), as noted in the response to arguments in the previous Office Action, the neutralizer and cooling layers would function as a filter and hence would be a filter (a layer of powder forming the neutralizer, a layer of coarse wire forming the cooling means, both of which would entrap particles by their very nature and hence act as a filter along with the filter layers on either side of the neutralizer and cooling layer). The drawings are not the only part of the disclosure, but rather also the specification, which teaches layers of material that would function as filters to some degree.

Regarding applicant's argument in the third paragraph of page 7 of the remarks that the neutralizer is not "for" filtration and that the powder decomposes, and that film 25 would melt and destroy the integrity of the bed of powder, this is not persuasive because, as noted above and in the previous action, the neutralizer would function as a filter as defined in the dictionary definition given previously (that its [primary] purpose is neutralizing pH would not preclude its also functioning as a filter), because there is no teaching of the powder degrading or decomposing to the point that it would not filter (i.e., it would have to no longer be a powder after neutralizing in order to not filter to some degree -- that is, turn into a gas -- and as the neutralizer is Iron Sulfate at Kirchoff

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et al, column 3, lines 23-24, it would not turn into a gas), and because film 25 melting at the perforation holes as the gas passes through would not destroy the bed of powder (there is no teaching of the powder 26 moving into the layer 28, and no reason to assume it would do so in appreciable amounts; what would be expected is that the gas would pass quickly through the bed of powder, taking some powder with it, but leaving some particulates, with the powder hence acting like a filter).

Regarding the fourth paragraph (that applicant's filter is different in the specification from Kirchoff et al's filter and cooling means), as the filter is not claimed in a manner that structurally defines over Kirchoff et al's arrangement, the claims are met by the reference.

The applicant argues on page 8 of the remarks that the combination of Kirchoff et al and Goetz et al does not teach the filter abutting the booster cup end surface and the perforated disc. However, as described above, the first and second filters, cooling layer and neutralizer together define a filter, and section 30 is a filter in addition to a heat sink (i.e., porous material the gas would pass through).

Finally, regarding the arguments on page 8 of the remarks that Kirchoff et al's ruptured tube is to delay delivery of gases and that Schneider et al would not make up for the deficiencies, as noted above the combination meets the limitations of the claims and the perforated tube of Goetz et al would also delay delivery of gases (i.e., if substituted for or in addition to the ruptured tube), as the combination does not involve a bodily incorporation of parts.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Culbreth whose telephone number is 571/272-6668. The examiner can normally be reached on Monday-Thursday, 9:00-6:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571/272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eric Culbreth
Primary Examiner
Art Unit 3616

/Eric Culbreth/
Primary Examiner, Art Unit 3616

<i>Application Number</i> 	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/826,437	QUIOC ET AL.	
	Examiner	Art Unit	
	Eric Culbreth	3616	